

Claims

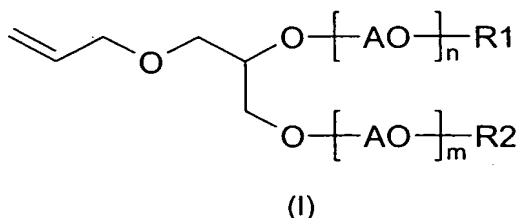
1. The use of a water-soluble or water-dispersible polymer, obtainable by polymerizing

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- a) at least one alkoxyated derivative of 3-allyloxy-1,2-propanediol (monomer A) and
 b) at least one ethylenically unsaturated mono- or dicarboxylic acid or the anhydrides, esters or mixtures thereof (monomer B) and
 10 c) if appropriate, one or more further ethylenically unsaturated monomers C,

as an additive in mineral building materials.

2. The use of a polymer according to claim 1, wherein at least one compound of the
 15 formula I

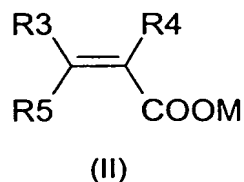


where

- 20 AO is C₁-C₁₂-alkylene oxide, styrene oxide or a mixture of two or more types thereof, it being possible for the two or more types to be linked either in random or in block form,
 n and m, independently of one another, are each an integer from 1 to 300 and
 R1 and R2, independently of one another, are each hydrogen, C₁-C₃₀-alkyl,
 25 C₅-C₈-cycloalkyl, C₆-C₂₀-aryl, C₁-C₃₀-alkanoyl, C₇-C₂₁-aroyl, sulfuric (mono)ester or phosphoric ester,

is used as monomer A.

- 30 3. The use of a polymer according to claim 1 or 2, wherein at least one compound of the formula II



where

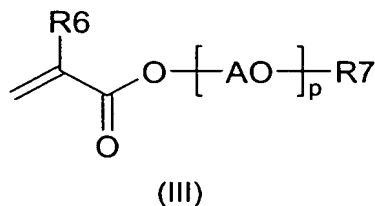
R3 and R4, independently of one another, may in each case be identical or different and are hydrogen or C₁-C₆-alkyl,

R5 is hydrogen, C₁-C₆-alkyl or a COOM group and

M is hydrogen, a monovalent or divalent metal ion, ammonium or an organic ammonium compound,

is used as monomer B.

4. The use of a polymer according to any of claims 1 to 3, wherein the weight average molecular weight M_w of the polymer is from 1 000 to 100 000.
5. The use of a polymer according to any of claims 1 to 4, wherein an ester of the formula III of (meth)acrylic acid with a polyalkylene oxide



where

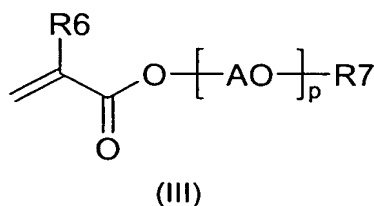
- R6 is hydrogen or a methyl radical,
- AO is C₁-C₁₂-alkylene oxide, styrene oxide or a mixture of two or more types thereof, it being possible for the two or more types to be linked either in random or in block form,
- R7 is hydrogen, C₁-C₃₀-alkyl, C₅-C₈-cycloalkyl, C₆-C₂₀-aryl, C₁-C₃₀-alkanoyl or C₇-C₂₁-aroyl and
- p is an integer from 1 to 300,

is used as monomer C.

6. The use of a polymer according to any of claims 1 to 5 as a cement dispersant.
7. The use of a polymer according to any of claims 1 to 6 as a gypsum dispersant.
8. A polymer obtainable by polymerizing
- a) at least one alkoxyated derivative of 3-allyloxy-1,2-propanediol (monomer A) and

- b) at least one ethylenically unsaturated mono- or dicarboxylic acid or the anhydrides, esters or mixtures thereof (monomer B) and
- c) if appropriate, one or more further ethylenically unsaturated monomers C.

- 5 9. The polymer according to claim 8, wherein at least one monomer C selected from the esters of (meth)acrylic acid with a polyalkylene oxide of the formula III



10 where

R6 is hydrogen or a methyl radical,

AO is C₁-C₁₂-alkylene oxide, styrene oxide or a mixture of two or more types thereof, it being possible for the two or more types to be linked either in random or in block form,

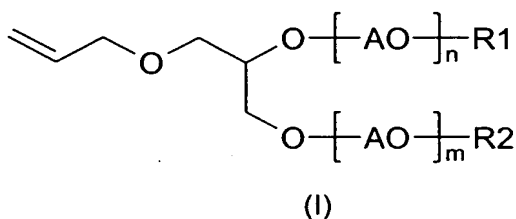
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R7 is hydrogen, C₁-C₃₀-alkyl, C₅-C₈-cycloalkyl, C₆-C₂₀-aryl, C₁-C₃₀-alkanoyl or C₇-C₂₁-aroyl and

p is an integer from 1 to 300,

20 is used.

10. The polymer according to claim 8 or 9, wherein at least one compound of the formula I



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where

AO is C₁-C₁₂-alkylene oxide, styrene oxide or a mixture of two or more types thereof, it being possible for the two or more types to be linked either in random or in block form,

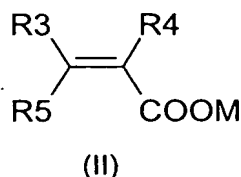
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n and m, independently of one another, are each an integer from 1 to 300 and

R1 and R2, independently of one another, are each hydrogen, C₁-C₃₀-alkyl, C₅-C₈-cycloalkyl, C₆-C₂₀-aryl, C₁-C₃₀-alkanoyl, C₇-C₂₁-aroyl, sulfuric (mono)ester or phosphoric ester,

5 is used as monomer A.

11. The polymer according to any of claims 8 to 10, wherein at least one compound of the formula II



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where

R3 and R4, independently of one another, may in each case be identical or different and are hydrogen or C₁-C₆-alkyl,

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R5 is hydrogen, C₁-C₆-alkyl or a COOM group and

M is hydrogen, a monovalent or divalent metal ion, ammonium or an organic ammonium compound,

is used as monomer B.

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12. A cement dispersant comprising at least one polymer according to any of claims 8 to 11.

13. A gypsum dispersant comprising at least one polymer according to any of claims 8 to 12.

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14. A mineral building material comprising cement, water and at least one polymer according to any of claims 8 to 11 and further conventional aggregates.

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15. A mineral building material comprising gypsum, water and at least one polymer according to any of claims 8 to 11 and further conventional aggregates.